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REFERENCES 3 and 44

COAL and COKE

SUPPLEMENTARY STATEMENT

Presented to the

ADVISORY BOARD
ON TARIFF AND TAXATION

BY

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TO THE CHAIRMAN AND MEMBERS OF THE ADVISORY BOARD ON TARIFF AND TAXATION

With further reference to the petition of the Canadian Gas Association, submitted to the Board on September 27th last, I would ask permission to present some additional reasons for granting to Canadian gas and coke companies, a rebate of the Customs Duty paid on the bituminous coal from which they produce gas and coke.

Thus far, our appeal for consideration has been based principally on the fact of discrimination.

To-day I shall endeavour to show that by assisting the companies to manufacture and sell gas and coke more cheaply, the Government will be showing a definite and practical interest in diminishing the use, in Canada, of imported anthracite coal, and also in reducing the quantity of bituminous coal used, wastefully, in its raw state.

Probably the best way to demonstrate what can be done, will be to recall what has already been accomplished by gas and coke companies, in replacing anthracite coal with fuels not in any way inferior, and yet less costly to the consumer, and with advantage to the country.

THE GAS INDUSTRY AND CANADA'S FUEL PROBLEM

The condition which prevails in Canada to-day, with regard to the supply of fuel necessary for the maintenance of the industrial activity of the country, demands that every possible economy be exercised, in order that the total requirements of fuel may be reduced to a minimum—that economic waste in fuel, be eliminated to the utmost possible extent.

The fuels available in Canada, may be generally stated as coal, wood, petroleum, and water-power electrically distributed. Each of these fuels has certain inherent advantages, and their economic value is largely determined by the service to which they may be applied, and the localities in which they may be required.

In considering the economic value of various fuels on which Canada may rely to meet its domestic and industrial requirements, manufactured gas must be given an important place.

The tremendous development and growth of the gas industry, particularly in recent years, furnishes abundant evidence of appreciation by the public, of the merits of the commodity supplied, and of the economy in the use of gas for the many thousands of purposes for which it is so well adapted.

THE NEW ERA OF GAS

The fuel practices of industry are changing. We hardly realize how fast this change is taking place until we look back fifteen, ten, or even five years. To-day, industry is turning out a multitude of products that were unheard of a few years ago, and has improved all kinds of operations to a point that would have been thought almost impossible not many years since. In the use of fuels, the improvement is particularly noticeable.

Raw bituminous coal, once almost universally used, is being supplanted in a constantly-growing number of operations, by manufactured gas. The growth of the use of gas in industry, is remarkable; twenty years ago it was almost nothing, to-day it is 20% of the total volume produced. In the 6 years from 1922 to 1928 the industrial demand has doubled.

This record is the more impressive in that it takes no account of producer gas, or coke oven gas generated privately, and used for industrial purposes, nor is any reference made to natural gas. The record is solely that of public utility undertakings, distributing the fuel which is produced from coal or oil or from both of these raw materials, and which is variously known as ''manufactured gas'', ''city gas'', or ''artificial gas''.

Not only in Canada, but in industrial centres all over America, in Great Britain and in Europe, the many advantages of this fuel are recognized, and it is being used for the heat treatment of materials, ranging all the way from the hardest and heaviest to the most delicate.

GAS HAS PROGRESSED FAR BEYOND ITS FIRST FUNCTION

Gas was once used solely for lighting. A few years ago the use of gas for heat was largely confined to home cooking. Large volume cooking was almost all done by means of coal. Now almost every hotel, restaurant and cafeteria of importance cooks with gas, and one bakery may use as much as one thousand homes. The use of gas is growing far more rapidly than the population.

At present most of our homes are heated by coal furnaces, many with oil furnaces, but in constantly growing numbers, the better class of houses are being equipped to use gas as fuel, because of its general superiority. Some of the advantages of gas for house heating are: (1) Economy of space occupied by the appliance. (2) No space required for storage of fuel. (3) No removal of ashes. (4) No financing of fuel supply. (5) Automatic control of temperature. (6) Ease of operation.

The use of gas for refrigeration has now begun; the gas refrigerator is a very successful appliance; it foreshadows the use of gas for cooling homes in summer, as well as for heating them in winter. Paradoxical as it may seem, this is distinctly looming upon the horizon. Gas is indeed progressing far beyond its first function.

SOME ADVANTAGES OF GAS

The success of this fuel in winning, holding and increasing its field, is primarily due to its possession of certain valuable and unique physical properties, viz.:

1. It is a smokeless fuel of high or low intensity, which can be used either for the direct application of heat, or as a source of motive power.

2. It is a flexible and readily applied fuel; it is easily controlled.

3. Its cost to the user, is always in direct proportion to the quantity used.

The economy of gas as a fuel, is seen in the estimate that coal resources would last twice as long, if all operations requiring heat, were done with gas, instead of with coal in the raw state, and this without taking into consideration the by-products of gas manufacture, including coke, which is itself a valuable fuel.

The undeveloped water powers of the country, will eventually be pressed into service, but our engineers have estimated that the total energy resulting from their full realization, will supply only a very small fraction of the heat we need. It will always be the function of gas to supply the bulk of our heat requirements.

SOME USES OF GAS

Concerning the gas industry, the following statement was published recently:—

> ''Consider for a moment the ridiculous supposition that the use of gas could be dispensed with over night. The effect would reach far beyond the idle cook stoves in thousands of homes. So greatly is American industry dependent upon the gas utility, that an estimated three hundred thousand mechanics would be forced to look for other means of employment. Industries are using gas to-day in thousands of different processes, yet engineers and gas experts declare that the surface of gas utilization has scarcely been scratched. Automobile manufacturers are among the largest users of gas, seventy-five per cent. of the heat treatment of metals being done with gas. Some of the individual manufacturers use more than a million cubic feet a day, or more than five times as much as a city of ten thousand people consumed per day ten years ago. Gas is used extensively in forging, welding, and cutting metal; hardening and tempering alloyed steel; lead and silver refining; glass making; drying lumber; pressing and singeing cloth and other processes too numerous to mention. Huge burners in the industrial centres consume more gas in a day than the average city of fifty thousand people. Probably ninety per cent. of the drying of lithographed and lacquered sheets of tin plates,—an important process in the manufacture of tin cans and containers,—is now done with gas. The ovens of one large bread baker alone daily use as much gas as is used in one thousand average homes. The use of gas in industrial operations obviates the necessity of tying

up large sums in fuel investments, or of providing large space for fuel storage. It does away with all the seasonal difficulties of coal transportation. It is a fuel that will never upset production schedules by being late in delivery. And, wherever used, it solves the smoke problem in our cities.''

GAS IN INDUSTRIAL CANADA

The statements concerning the situation in the United States, apply almost equally to the situation in Canadian industrial centres, where the gas utilities have records of more than eighty years of service, the last fifteen of which have witnessed the general development of gas in industry.

Here, also, gas was adopted as a fuel, first by the industries connected with the preparation of foods, followed by other industries of many and diverse natures. In industries connected with the preparation and sale of food products, and in the treatment of steel and other metals, the list of large Canadian consumers includes many outstanding companies and firms.

THE HEAT TREATMENT OF METALS

The heat treatment of steel by gas, has developed some wonderful economic results. In the construction of automobiles, thick pieces formerly used, have been replaced by thinner sections, which, although lighter, have greater strength, on account of the heat treatment. Heat treatment of steel, has also made more rapid production possible in certain lines. Cutting tools can be hardened in such a manner, that they can be used at a very high rate of speed.

The successful treatment of steel, depends almost entirely on certain very definite conditions of the heating operation. Steel dies when unevenly heated, crack and become useless. If too much air is allowed to penetrate the steel under treatment, it will blister and scale. Excessive temperatures take the ''life'' out of steel. There are literally scores of requirements which must be met. Gas is the fuel which fully meets all these requirements.

Steel treating is also an important factor in reducing material costs. Practically every manufactured product that contains steel, has to go through some form of heat treatment in the process of fabrication. This has created a great demand for rapid production methods. Accurate heating at all times, cannot, however, be dispensed with. Gas meets the requirements in the most economical way.

THE FUTURE OF THE GAS INDUSTRY

It has been said that for industries as for individuals, life is a continuous series of adjustments to changing conditions, and success depends upon the ability to make these adjustments with the minimum of delay and loss. The gas industry has not only adapted itself to the rapidly changing conditions of the past decade, but has gathered strength in the process, and at the present time is facing opportunities for growth and expansion, unequalled in all its long history.

Expansion of the gas industry is inevitable, because it supplies heat, a universal need, efficiently, economically and conveniently. The gas industry grows as towns grow into cities and cities into industrial centres; it is a vital part of the nation's economic progress and a permanent part of the community it serves.

GAS AND COKE AS SUBSTITUTES FOR ANTHRACITE COAL

Gas and coke are the two great substitutes for anthracite coal, and I submit that the raw material (bituminous coal) from which they are produced should not be taxed,—more particularly as anthracite coal is admitted to Canada free of duty, and coke manufactured in a foreign country from bituminous coal not subject to duty in that foreign country, is on the Canadian free list, competing with coke produced in Canada from coal upon which a duty of 50 cents per ton must be paid.